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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/432,334	11/02/1999	RONALD A. GUIDOTTI	98-2069	9910

23413 7590 02/26/2002

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EXAMINER

MAPLES, JOHN S

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 02/26/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS-13

Office Action Summary	Application No.	Applicant(s)	
	09/432,334	GUIDOTTI ET AL.	
	Examiner	Art Unit	
	John S. Maples	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,24-28 and 41-49 ~~is~~ are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,24-28 and 41-49 ~~is~~ are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 21, 24-28 and 41-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Muffoletto et al. (Muffoletto) (New rejection with regard to claims 41-48).

Reference is made to claims 1 and 7 of the patent to Muffoletto. It is inherent that with the thickness of the active material being 0.001 inch (25 microns) that the particle size would be within the microstructured size range as claimed in claim 27.

Applicant's arguments have all been considered but are not deemed persuasive. Applicant argues that the pyrite material in Muffoletto does not decompose or transform to a material unsuitable for use as an electrode. The examiner respectfully disagrees. First of all it is noted that Muffoletto uses the same material as applicant-iron disulfide. Because Muffoletto uses the same material as applicant, the iron disulfide would function the same way as applicant and hence the claimed subject matter of applicant is met by the teachings in Muffoletto. Further, because Muffoletto uses the same material as applicant, it could be expected that the pyrite in Muffoletto would function as applicant's in that the material, by itself, would decompose or transform into a material that would be unsuitable for use as an electrode.

Applicant further argues at the top of page 7 of the recent amendment that conventional plasma spray of pyrite does not result in the formation of pyrite. This may be true, however, Muffoletto uses a different plasma spray than is referenced on page 8,

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line 8 of the present specification and so a different product is obtained than that shown in the present specification.

The fact that Muffoletto does not set forth a method to prevent pyrite from decomposing during thermal spraying is also argued by applicant. However, as Example 1 of Muffoletto discloses, the battery produced using pyrite as an electrode works and produces power as evidenced by the results shown in Table 2.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 21, 28, 41, 44, 45 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muffoletto in view of Gay. (New Rejection with regard to claims 41, 44, 45 and 49).

Muffoletto does not specifically teach a nanostructured iron sulfide. Gay discloses a nanostructured iron sulfide in Example 1 of this patent. To utilize in the

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17 teachings of Muffoletto the 15 nanometer particle size of Gay would have been obvious to one of ordinary skill in this art at the time the invention was made so that the active material would have been packed more tightly and would have produced a greater power output.

Applicant's arguments have again all been considered but are not persuasive. Applicant has argued the above 103 rejection based on the insufficiency of the primary reference to Muffoletto. These arguments are believed to have been adequately addressed in the section 2 of this action.

Finally, applicant asserts that the combination of Muffoletto and Gay do not teach the claimed invention. The examiner believes that they do as evidenced by both sections 2 and 4 of this action. In addition, applicant has not specifically pointed out where the two references as a combination fail to provide all of the claimed elements.

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20 5. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the


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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John S. Maples whose telephone number is 703-308-1795. The examiner can normally be reached Monday through Thursday from 6:15-3:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gabrielle Brouillette can be reached on 703-308-0756. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


John S. Maples
Primary Examiner
Art Unit 1745

JSM/2-21-2002